Appendix VI

Suggested Detection Monitoring Analytes

This list is intended as a guide to owners or operators of treatment, storage and disposal facilities, and to enforcement and permit granting officials, to assist in the selection of appropriate monitoring parameters for specification in the water quality sampling and analysis plan. The Department is not requiring that all facilities use this list, but the Department believes that these are the best leak indicators for the majority of units, especially if the unit contains a variety of wastes. This list is called Leak Detection Analytes and is made up of volatile organics, hazardous metals and pH (hydrogen ion).

Investigations by USEPA's Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, and others, have shown that most (as high as 70 percent) of the compounds leaking from RCRA sites are volatile organics. This preponderance of volatiles is not surprising since these compounds would be more likely to move quickly and easily through the environment given their volatility. Therefore, it is logical to conclude that volatile organics would be among the best indicators for early detection of a release.

The rest of the Leak Detection Analytes list is made up of those metals that are amenable to the basic inductively coupled plasma (icp) scan and pH. The metals were chosen because they make up the second most common group of substances that leak from hazardous waste land disposal units, and therefore, are also expected to be excellent leak indicators. pH was chosen because of its all around utility in environmental monitoring and data interpretation. pH was also chosen because of its ability to indicate leaks that otherwise might not be indicated because no single substance has exceeded a detectable level.

Leak Detection Analytes

Volatile Organics	Metals
Acetone	Antimony
Acrolein	Barium
Acrylonitrile	Beryllium
Allyl chloride	Cadmium
Benzene	Chromium
Bromodichloromethane	Cobalt
Bromoform	Copper
Carbon disulfide	Lead
Carbon tetracholoride	Nickel
Chlorobenzene	Selenium
Chloroethane	Thallium
Chloroform	Vanadium
Chloroprene	Zinc
Dibromochloromethane	
1,2-Dibromo-3-chloropropane	
pH	
1,2-Dibromoethane	
trans-1,4-Dichloro-2-butene	
Dichlorodifluoromethane	
1,1-Dichloroethane	
1,2-Dichloroethane	
trans-1,2-Dichloroethylene	
1,2-Dichloropropane	
trans-1,3-Dichloropropene	
cis-1,3-Dichloropropene	
Ethyl methacrylate	
2-Hexanone	
Methacrylonitrile	
Methyl bromide	
Methyl chloride	
Methylene bromide	

Volatile Organics	Metals
Methylene chloride	
Methyl ethyl ketone	
Methyl iodide	
Methyl methacrylate	
4-Methyl-2-pentanone	
Pentachloroethane	
2-Picoline	
Propionitrile	
Pyridine	
Styrene	
1,1,1,2-Tetrachloroethane	
1,1,2,2-Tetrachloroethane	
Tetrachloroethylene	
Toluene	
1,1,1-Trichloroethane	
1,1,2-Trichloroethane	
Trichloroethylene	
Trichlorofluoromethane	
1,2,3-Trichloropropane	
Vinyl acetate	
Vinyl chloride	
Xylene	

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150, 25159 and 25159.5, Health and Safety Code; 40 CFR Part 264, Appendix IX.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

